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| 10/568,967 | 03/14/2006 | Hideo Taka | 06096/HG | 8880 |
| 1933 7590 08/03/2010 FRISHAUF, HOLTZ, GOODMAN & CHICK, PC 220 Fifth Avenue 16TH Floor NEW YORK, NY 10001-7708 | | | EXAMINER WILSON, MICHAEL H | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/568,967

Applicant(s)

TAKA ET AL.

Examiner

MICHAEL WILSON

Art Unit

1786

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3, 9-26 and 28-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3, 9, 10, 15-26 and 28-31 is/are allowed.
- 6) ☒ Claim(s) 1 and 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ ~~Notes of Informal Patent Application~~
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This Office action is in response to Applicant's amendment filed 11 June 2010, which cancels claims 4-8 and 27 and amends claims 1, 3, 9, 10, and 28.

Claims 1, 3, 9-26, and 28-31 are pending.

2. Applicants overcame the rejection of claims 1 and 11-14 under 35 U.S.C. 102(a) as being anticipated by Kita et al. (JP 2004-185967 A) by amending the claims in the reply filed 11 June 2010.

3. Applicants overcame the rejections under 35 U.S.C. 103(a) based on Takimoto et al. (US 5,331,182 A) by amending the claims and providing persuasive evidence of unexpected results in the reply filed 11 June 2010.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 12, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Igarashi (US 6,558,819 B1).

Regarding claims 1, 12, and 13, Igarashi discloses an organic electroluminescent device comprising at least one organic compound layer between a pair of electrodes

(column 12, lines 10-19). The reference discloses the organic compound layer comprises a polymer having a repeating unit which meets instant formula (1) wherein Ar is phenyl and L₁ is diphenylsilane (columns 6-10, polymers 1-1, 1-2, 1-7, and 1-10 to 1-12). The reference also discloses that the device can be part of a display device or an illuminator (column 1, lines 5-16).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Igarashi (US 6,558,819 B1) as applied to claim 1 above and in view of Nakagawa et al. (US 2004/0124766 A1).

Claim 1 is taught by Igarashi, but included here for completeness.

Regarding claim 11, Igarashi discloses all the claim limitations as set forth above. Additionally the reference discloses the device emits blue light (column 1, line 47). However the reference does not explicitly disclose the device emitting white light.

Nakagawa et al. teach a similar organic electroluminescent device (abstract). The reference teaches including red and/or green light-emitting compounds into an emissive layer with a blue emitting compound will allow a device to emit white light ([0141]-[0154]).

It would be obvious to one of ordinary skill in the art at the time of the invention to add green and red emitting compounds to the luminescent layer of Igarashi. One of ordinary skill in the art would be motivated by a desire to produce an electroluminescent device which emits white light. One of ordinary skill would reasonably expect success given that Nakagawa et al. teach red, green, and blue emitting compounds may be used together in an emitting layer and such a combination results in white light (Nakagawa et al. [0154]).

9. Claims 1 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Igarashi (US 6,558,819 B1) as applied to claim 1 above and in view of Lee (US 2002/0079835 A1).

Claim 1 is taught by Igarashi, but included here for completeness.

Regarding claim 14, Igarashi discloses all the claim limitations as set forth above. Additionally the reference discloses the device is suitable for display devices, displays

and back lights (column 1, lines 5-16). However the reference does not explicitly disclose a display equipped with a liquid crystal cell as a display means.

Lee teaches a similar electroluminescent device (abstract). The reference teaches an electroluminescent device may be used as a backlight for a liquid crystal display (LCD) panel.

It would be obvious to one of ordinary skill in the art at the time of the invention to combine the LCD panel with the device of Igarashi as taught by Lee. One of ordinary skill in the art would be motivated by a desire to utilize the device of Igarashi.

Allowable Subject Matter

10. Claims 3, 9, 10, 15-26, and 28-31 are allowed.

11. The following is a statement of reasons for the indication of allowable subject matter:

While Takimoto et al. (US 5,331,182 A) teaches an organic electroluminescent device with a polymer comprising comprises aryl groups and divalent O or S groups in the backbone and Tokito et al. (US 2003/0091862 A1) teaches polymers with pendant carbazole groups Applicants have demonstrated unexpected results for the external quantum efficiency, emission life, and driving voltage for devices with polymers of instant formulae (2) and (22) as presently claimed.

Response to Arguments

12. Applicant's showing of unexpected results coupled with the amendment to claims 3, 9, and 10 has been fully considered and is persuasive.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **MICHAEL WILSON** whose telephone number is (571) 270-3882. The examiner can normally be reached on Monday-Thursday, 7:30-5:00PM EST, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MHW

/D. Lawrence Tarazano/
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